

CLAIMS

1. A basic silane for production of a mesoporous silica utilizing an anionic surfactant micelle, characterized in that the basic silane is represented by the following general formula (1).



wherein, R^1 , R^2 , R^3 and R^4 represent a normal or branched alkyl group or a hydrogen atom, and X represents a normal or branched alkylene group. When R^4 has a carbon number of 0, the Component (C) basic silane corresponds to a primary, secondary or tertiary amine.

2. A mesoporous silica complex characterized by being derived from the following Components (A), (B) and (C).

(A) An anionic surfactant

(B) A silicate monomer

(C) A basic silane

3. The mesoporous silica complex according to claim 2, characterized in that said Component (C) is the basic silane recited in claim 1.

4. A mesoporous silica outer shell characterized by being derived from the following Components (A), (B) and (C).

(A) An anionic surfactant

(B) A silicate monomer

(C) A basic silane

5. The mesoporous silica outer shell according to claim 4, characterized in that said component (C) is the basic silane recited in claim 1.

6. A mesoporous silica characterized by being derived from the following Components (A), (B) and (C).

(A) An anionic surfactant

(B) A silicate monomer

(C) A basic silane

7. The mesoporous silica according to claim 6, characterized in that said Component (C) is the basic silane recited in claim 1.

8. A method for producing a mesoporous silica complex having mesopores uniform in size, characterized in that said Components (A), (B) and (C) recited in claim 2 or 3 are mixed in water or a mixed solvent of a water-miscible organic solvent and water.

9. A method for producing a mesoporous silica outer shell using, as the template, the structure of the mesoporous silica complex obtained by the method according to claim 8, characterized in that the mesoporous silica complex is washed with an acidic aqueous solution, a water-miscible organic solvent, or an aqueous solution thereof, to remove the Component (A) anionic surfactant.

10. A method for producing a mesoporous silica,

characterized in that the mesoporous silica complex obtained by the method according to claim 8 is calcined.

11. A method for producing a mesoporous silica, characterized in that the mesoporous silica outer shell obtained by the method according to claim 9 is calcined.